

Notice of Allowability

Application No.

10/809,512

Examiner

Rochelle Blackman

Applicant(s)

SAISHU ET AL.

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 05 March 2007 & 30 March 2007.
2. ☒ The allowed claim(s) is/are 18-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

Election/Restrictions

This application is in condition for allowance except for the presence of claims 2-15 directed to species non-elected without traverse. Accordingly, claims 2-15 have been cancelled.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claims 2-15 have been cancelled, due to the claims being directed to species non-elected without traverse (see Attachment).

REASONS FOR ALLOWANCE

1. Claims 18-20 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Claim 18 has been found to be allowable because the prior art of record either alone or in combination neither discloses nor makes obvious the stereoscopic display device comprising the particular feature of the vertical direction indicator having a cyclic structure in a vertical direction, in combination with the other particular combination of features recited in claim 18.

Art Unit: 2851

Claim 19 have been found to be allowable because the prior art of record either alone or in combination neither discloses nor makes obvious the stereoscopic display device comprising the particular feature of the detecting mechanism having a blind structure, in combination with the other particular combination of features recited in claim 19.

Claim 20 has been found to be allowable because it depends from claim 19.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2851

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Rochelle Blackman', with a long horizontal flourish extending to the right.

Rochelle Blackman
Patent Examiner

RB

EXAMINER'S AMENDMENT

Customer No. 22,852
Application No. 10/809,510
Attorney Docket No. 02887.0273

LISTING OF CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Canceled).

2. ~~(Withdrawn) A stereoscopic display device of a one-dimensional integral photography system, comprising:~~

~~a display unit including a display plane in which pixels are arranged flatly in a matrix shape;~~

~~a parallax barrier including a plurality of apertures or a plurality of lenses and being configured to control directions of rays from the pixels such that a horizontal disparity is included but a vertical disparity is not included; and~~

~~a viewing distance adjusting mechanism which changes a vertical direction perspective projection image according to change in viewing distance, the display plane of the display unit being divided so as to correspond to elemental images for respective apertures or the lenses of the parallax barrier.~~

3. (Withdrawn) A stereoscopic display device of a one-dimensional integral photography system according to claim 2, wherein a horizontal direction pitch of the parallax barrier is integer times a horizontal pitch of the pixels, and an image which has been subjected to a perspective projection defined by the viewing distance in a vertical direction and which has been subjected to an orthographic projection in a horizontal direction is divided and arranged for respective pixel columns.

- claims 2-15
cancelled
4. ~~(Withdrawn) A stereoscopic display device of a one-dimensional integral~~
photography system according to claim 3, wherein the viewing distance adjusting
function changes the width of the elemental image according to change in
viewing distance and simultaneously enlarges/reduces the perspective projection
image.
5. (Withdrawn) A stereoscopic display device of a one-dimensional integral
photography system according to claim 3, wherein the viewing distance adjusting
function changes the width of the elemental image by performing stepwise
switching among fixed viewing distances.
6. (Withdrawn) A stereoscopic display device of a one-dimensional integral
photography system according to claim 5, wherein the viewing distance adjusting
function changes the width of the elemental image according to change in
viewing distance and simultaneously enlarges/reduces the perspective projection
image.
7. ~~(Withdrawn) A stereoscopic display device of a one-dimensional integral~~
photography system according to claim 5, wherein the viewing distance adjusting
function changes the perspective projection image in a different viewing distance
only in a vertical direction according to change in viewing distance within a
constant range where the width of the elemental image is not changed.
8. (Withdrawn) A stereoscopic display device of a one-dimensional integral
photography system, comprising:
- a display unit including a display plane in which pixels are arranged flatly
in a matrix shape;
 - a parallax barrier including a plurality of apertures or a plurality of lenses
and being configured to control directions of rays from the pixels
such that a horizontal disparity is included but a vertical disparity is
not included; and
- Examiner's mark
4/17/07
R.B.

~~a detecting mechanism configured to detect an out-of-viewing zone to the display plane in up and down or front and rear directions, the display plane of the display unit being divided so as to correspond to elemental images for respective apertures or the lenses of the parallax barrier.~~

9. (Withdrawn) A stereoscopic display device of a one-dimensional integral photography system according to claim 8, wherein the detecting mechanism is a vertical direction indicator.

10. (Withdrawn) A stereoscopic display device of a one-dimensional integral photography system according to claim 9, wherein the vertical direction indicator has a cyclic structure in a vertical direction.

11. (Withdrawn) A stereoscopic display device of a one-dimensional integral photography system according to claim 8, wherein the detecting mechanism has a blind structure.

12. (Withdrawn) A stereoscopic display device of a one-dimensional integral photography system according to claim 11, wherein the blind structure has a curved shape.

13. (Withdrawn) A stereoscopic display device of a one-dimensional integral photography system according to claim 11, wherein the blind structure has a cyclic structure in a vertical direction.

14. (Withdrawn) A stereoscopic display device of a one-dimensional integral photography system, comprising:

a display unit including a display plane in which pixels are arranged flatly in a matrix shape; and

a parallax barrier including a plurality of apertures or a plurality of lenses and being configured to control directions of rays from the pixels such that a horizontal disparity is included but a vertical disparity is not included, the display plane of the display unit being divided so

claims 2-15
cancelled

Examiner's amct
4/17/10
R.B.

~~as to correspond to elemental images for respective apertures or the lenses of the parallax barrier, and the display plane of the display unit being formed in a shape of a curved face in a vertical direction, and the a perspective projection image in a vertical direction where the center point determined from the radius of curvature of the curved face is defined as a viewing distance position being displayed on the display plane.~~

15. (Withdrawn) A stereoscopic display device of a one-dimensional integral photography system according to claim 14, further comprising a curvature ~~changing mechanism which changes the curvature of the display plane.~~
16. (Canceled).
17. (Canceled).
18. (Currently Amended) A stereoscopic display device of a one-dimensional integral photography system, comprising: according to claim 1, further comprising
a display unit including a display plane in which pixels are arranged flatly
in a matrix shape;
a parallax barrier including a plurality of apertures or a plurality of lenses
and being configured to control directions of rays from the pixels
such that a horizontal disparity is included but a vertical disparity is
not included; and
a detecting mechanism which detects an out-of-viewing zone to the
display plane in up and down or front and rear directions, the
detecting mechanism being a vertical direction indicator having a
cyclic structure in a vertical direction,
a horizontal direction pitch of the parallax barrier being integer times a
horizontal pitch of the pixels, the display plane of the display unit
being divided so as to correspond to elemental images for
respective apertures or the lenses of the parallax barrier, and an

image subjected to a perspective projection in a fixed viewing distance in a vertical direction and subjected to an orthographic projection in a horizontal direction being divided and arranged for respective columns of the pixels.

19. (Currently Amended) A stereoscopic display device of a one-dimensional integral photography system, comprising: according to claim 1, further comprising
a display unit including a display plane in which pixels are arranged flatly in a matrix shape;
a parallax barrier including a plurality of apertures or a plurality of lenses and being configured to control directions of rays from the pixels such that a horizontal disparity is included but a vertical disparity is not included; and
a detecting mechanism which detects an out-of-viewing zone to the display plane in up and down or front and rear directions, the detecting mechanism having a blind structure;
a horizontal direction pitch of the parallax barrier being integer times a horizontal pitch of the pixels, the display plans of the display unit being divided so as to correspond to elemental images for respective apertures or the lenses of the parallax barrier, and an image subjected to a perspective projection in a fixed viewing distance in a vertical direction and subjected to an orthographic projection in a horizontal direction being divided and arranged for respective columns of the pixels.
20. (Original) A stereoscopic display device of a one-dimensional integral photography system according to claim 19, wherein the blind structure has a curved shape.
21. (Canceled).